

Appl. No. 09/655,402
Amdt. dated September 10, 2003
Reply to Office Action of June 11, 2003

Docket No.: K-214

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A power control method ~~of a base station~~ in a multilayered communication system comprising:
- (a) determining if a mobile station is within a soft handoff region between a macrocell region and a picocell region; and
- (b) performing a power control such that a transmission power level of said mobile station is not lowered, if said mobile station is determined to be within said soft handoff region and if a soft handoff of said mobile station is required.
2. (Currently Amended) A The method of claim 1, wherein in ~~(b)~~, the transmission power level of said mobile station is not lowered during a transmission of an extended handoff direction message and a handoff complete message.
3. (Currently Amended) A The method of claim 2, wherein in ~~(b)~~, a base station which provides service to said picocell performs a power control to maintain the transmission power level of said mobile station.

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4. (Currently Amended) ~~A~~The method of claim 2, wherein ~~in (b)~~, a base station which provides service to said picocell performs a power control to increase the transmission power level of said mobile station.

5. (Currently Amended) ~~A~~The method of claim 1, wherein ~~in (b)~~, a base station which provides service to said picocell performs a power control to maintain the transmission power level of said mobile station.

6. (Currently Amended) ~~A~~The method of claim 1, wherein ~~in (b)~~, a base station which provides service to said picocell performs a power control to increase the transmission power level of said mobile station.

7. (Currently Amended) ~~A~~The method of claim 1, ~~wherein in (b)~~, further comprising:

setting a reverse link coverage of said picocell ~~is set~~ greater than a forward link coverage of said picocell.

8. (Currently Amended) ~~A~~The method of claim 7, ~~wherein~~ further comprising:
controlling a level of transmission power of a base station which provides service to said picocell to set said forward link coverage relatively equal to a size of said picocell.

9. (Currently Amended) ~~A~~ The method of claim 8, wherein setting said reverse link coverage greater than said forward link coverage ~~by~~ comprises not attenuating signal waves when received by a base station which provides service to said picocell.

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10. (Currently Amended) ~~A~~ The method of claim 7, wherein setting said reverse link coverage greater than said forward link coverage ~~by~~ comprises not attenuating signal waves when received by a base station which provides service to said picocell.

11. (Currently Amended) A power control method of a base station in a multilayered communication system comprising:

(a) determining if a mobile station is within a soft handoff region between a macrocell region and a picocell region;

(b) setting a reverse link coverage of said picocell greater than a forward link coverage of said picocell, if said mobile station is determined to be within said soft handoff region and if a soft handoff of said mobile station is required; and

(c) performing a power control such that a transmission power level of said mobile station is not lowered during a transmission of an extended handoff direction message and a handoff complete message, if said mobile station is determined to be within said soft handoff region and if a soft handoff of said mobile station is required.

12. (Currently Amended) ~~A-The method of claim 11, wherein in (c),~~ a base station which provides service to said picocell performs a power control to maintain the transmission power level of said mobile station.

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13. (Currently Amended) ~~A-The method of claim 12, wherein in (b),~~ further comprising:

controlling a level of transmission power of a base station which provides service to said picocell to set said forward link coverage relatively equal to a size of said picocell.

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14. (Currently Amended) ~~A-The method of claim 12, wherein in (b),~~ further comprising:

setting said reverse link coverage greater than said forward link coverage by not attenuating signal waves when received by a base station which provides service to said picocell.

15. (Currently Amended) ~~A-The method of claim 11, wherein in (c),~~ a base station which provides service to said picocell performs a power control to increase the transmission power level of said mobile station.

16. (Currently Amended) ~~A~~ The method of claim 15, ~~wherein in (b), further~~
comprising:

controlling a level of transmission power of a base station which provides service to
said picocell to set said forward link coverage relatively equal to a size of said picocell.

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17. (Currently Amended) ~~A~~ The method of claim 15, ~~wherein in (b), further~~
comprising:

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setting said reverse link coverage greater than said forward link coverage by not
attenuating signal waves when received by a base station which provides service to said
picocell.

18. (Currently Amended) ~~A~~ The method of claim 11, ~~wherein in (b), further~~
comprising:

controlling a level of transmission power of a base station which provides service to
said picocell to set said forward link coverage relatively equal to a size of said picocell.

19. (Currently Amended) ~~A~~ The method of claim 11, ~~wherein in (b), further~~
comprising:

setting said reverse link coverage greater than said forward link coverage by not attenuating signal waves when received by a base station which provides service to said picocell.

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20. (Currently Amended) A power control method of a base station in a multilayered communication system comprising:

(a)-determining if a mobile station is within a soft handoff region between a macrocell region and a picocell region;

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(b)-setting a reverse link coverage of said picocell greater than a forward link coverage of said picocell, if said mobile station is determined to be within said soft handoff region and if a soft handoff of said mobile station is required, wherein controlling a level of transmission power of a base station which provides service to said picocell to set said forward link coverage relatively equal to a size of said picocell and setting said reverse link coverage greater than said forward link coverage by not attenuating signal waves when received by said base station; and

(c)-performing a power control at said base station, if said mobile station is determined to be within said soft handoff region and if a soft handoff of said mobile station is required, wherein said base station either maintains the transmission power level of said mobile station or increases the transmission power level of said mobile station.